

Review of: "The Application of Adjustable Magnetic Devices in Electric Power Systems"

Jacek Kozyra

Potential competing interests: No potential competing interests to declare.

I enjoyed reading the manuscript entitled "The Application of Adjustable Magnetic Devices in Electric Power Systems" in which the author demonstrates some potential application of magnetic devices with adjustable parameter values. Overall the manuscript succeeds in highlighting some of the benefits and applications of this technology.

The issue of adaptive passive devices for improving the quality of electricity presented in the paper is very useful in order to understand the adaptation of adaptive compensators to changes in load power as well as changes taking place in the power line. However, the analysis of the working principle of the inductor explains theoretically that it can work in two modes, as a tuned inductor or a tuned capacitor. This has also been proven during the research carried out.

Simulation studies of the field model of the tuned inductor consisted in obtaining technical details of the inductor, which were necessary to design its laboratory prototype and obtaining confirmation of the assumed characteristics of the TI as an adjustable magnetic device, i.e. its ability to change the equivalent inductance.

Experimental studies confirmed the possibility of smoothly obtaining the desired reactance value as a result of flux control in the induction coil, with a relative error of not more than 15%.

Based on the research results obtained, I have a question for the author, which I am asking for an answer.

How the proposed prototype of the device will affect the quality of electricity and in what type of lines (LV, MV, HV) it can be effectively used. There is no such comparison because the author generally uses the term power line. Therefore, I propose to carry out tests using a prototype device for the mentioned line voltage levels and compare the obtained results.